

Title (en)

Immersion lithographic apparatus and device manufacturing method

Title (de)

Lithografische Immersionsvorrichtung und Geräteherstellungsverfahren

Title (fr)

Appareil lithographique en immersion et procédé de fabrication du dispositif

Publication

EP 2073062 A1 20090624 (EN)

Application

EP 08075950 A 20081217

Priority

US 858907 P 20071221

Abstract (en)

A lithographic apparatus includes a liquid supply system configured to supply an immersion liquid between a downstream optical element of a projection system of the lithographic apparatus and the substrate, and a control system which is arranged to drive the substrate table so as to perform an acceleration profile to accelerate the substrate table from a first velocity in a first direction to a second velocity in a second direction. The acceleration profile is asymmetric in time and is dimensioned so that when the substrate table is accelerated according to the acceleration profile, a force to break a meniscus of the immersion liquid remains lower than a force to maintain the meniscus of the immersion liquid.

IPC 8 full level

G03F 7/20 (2006.01)

CPC (source: EP KR US)

G03F 7/2041 (2013.01 - KR); **G03F 7/70341** (2013.01 - EP KR US); **G03F 7/70725** (2013.01 - EP US)

Citation (applicant)

- US 4509852 A 19850409 - TABARELLI WERNER [LI], et al
- WO 9949504 A1 19990930 - NIKON CORP [JP], et al
- EP 03252955 A 20030513
- EP 1420300 A2 20040519 - ASML NETHERLANDS BV [NL]

Citation (search report)

- [YA] EP 1482372 A1 20041201 - ASML NETHERLANDS BV [NL]
- [YA] US 2005128460 A1 20050616 - VAN DEN BIGGELAAR PETRUS MARIN [NL], et al
- [A] EP 1865539 A1 20071212 - NIKON CORP [JP]
- [A] JP 2000040658 A 20000208 - NIKON CORP

Citation (examination)

US 2007243697 A1 20071018 - LEENDERS MARTINUS HENDRIKUS A [NL], et al

Cited by

US11099490B2; US8405817B2; WO2018007118A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 08075950 A 20081217; CN 200810185625 A 20081217; JP 2008317800 A 20081215; KR 20080130149 A 20081219; SG 2008092165 A 20081210; TW 97148044 A 20081210; US 32914508 A 20081205